

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

29. (New) A laser apparatus for generating laser light to be transmitted through an optical transmission system, comprising:

a laser that emits light that is substantially linearly polarized when in use;

a quarter wave retarder plate that is positioned with respect to the laser so that:

light emitted by the laser is circularly polarized by the wave retarder plate so as to have a predetermined handedness before reaching an optical transmission system; and

light reflected back toward the laser has a linear polarization, after passing through the quarter wave retarder plate a second time, that is orthogonal to the linearly polarized light emitted by the laser; and

a linear polarizer that is positioned between the laser and the quarter wave retarder plate so as to:

permit the linearly polarized light emitted by the laser to pass through the linear polarizer; and

block light reflected back toward the laser by the optical fiber that has a linear polarization that is orthogonal to the linearly polarized light emitted by the laser.

30. (New) The laser apparatus as recited in claim 29, wherein the linear polarizer is disposed adjacent to a surface of the quarter wave retarder plate facing the laser.

31. (New) The laser apparatus as recited in claim 29, further comprising a lens that is positioned so that the quarter wave retarder plate is disposed between the lens and the laser.

32. (New) The laser apparatus as recited in claim 29, further comprising a lens that is positioned between the quarter wave retarder plate and the laser.

33. (New) The laser apparatus as recited in claim 29, further comprising a hermetically sealed housing within which the laser is disposed, the housing having a window through which the light emitted by the laser is transmitted.

34. (New) The laser apparatus as recited in claim 33, further comprising a thin film antireflective coating on at least one surface of the window.

35. (New) The laser apparatus as recited in claim 33, the quarter wave retarder plate comprising a portion of the hermetically sealed housing.

36. (New) The laser apparatus as recited in claim 35, the quarter wave retarder plate comprising the window of the hermetically sealed housing.

37. (New) The laser apparatus as recited in claim 35, further comprising a thin film antireflective coating on a surface of the quarter wave retarder plate.

38. (New) A laser apparatus for generating laser light to be transmitted through an optical transmission system, comprising:

a laser that emits light that is substantially linearly polarized when in use, the laser having an oscillation mode;

a quarter wave retarder plate that is positioned with respect to the laser so that:

light emitted by the laser is circularly polarized by the wave retarder plate so as to have a predetermined handedness before reaching an optical transmission system; and

light reflected back toward the laser has a linear polarization, after passing through the quarter wave retarder plate a second time, that is orthogonal to the linearly polarized light emitted by the laser;

wherein the laser apparatus does not include any polarizing element positioned between the laser and the quarter wave retarder plate so that light reflected back toward the laser that has a linear polarization that is orthogonal to the linearly polarized light emitted by the laser continues toward the laser unimpeded by any polarizing element but does not couple back onto the oscillation mode of the laser.

39. (New) The laser apparatus as recited in claim 38, further comprising a lens that is positioned so that the quarter wave retarder plate is disposed between the lens and the laser.

40. (New) The laser apparatus as recited in claim 38, further comprising a lens that is positioned between the quarter wave retarder plate and the laser.

41. (New) The laser apparatus as recited in claim 38, further comprising a hermetically sealed housing within which the laser is disposed, the housing having a window through which the light emitted by the laser is transmitted.

42. (New) The laser apparatus as recited in claim 41, further comprising a thin film antireflective coating on at least one surface of the window.

43. (New) The laser apparatus as recited in claim 41, the quarter wave retarder plate comprising a portion of the hermetically sealed housing.

44. (New) The laser apparatus as recited in claim 43, the quarter wave retarder plate comprising the window of the hermetically sealed housing.

45. (New) The laser apparatus as recited in claim 43, further comprising a thin film antireflective coating on a surface of the quarter wave retarder plate.

46. (New) A light emission and transmission system, comprising:
a laser that emits light that is substantially linearly polarized when in use, the laser having an oscillation mode;
an optical fiber positioned relative to the laser so that at least a majority of the light emitted by the laser is transmitted away from the laser; and
a quarter wave retarder plate positioned with respect to the laser so that:
light emitted by the laser is circularly polarized by the wave retarder plate so as to have a predetermined handedness before reaching the optical fiber; and
light reflected back toward the laser by the optical fiber has a linear polarization, after passing through the quarter wave retarder plate a second time, that is orthogonal to the linearly polarized light emitted by the laser so as to not couple back onto the oscillation mode of the laser.
47. (New) A light emission and transmission system as recited in claim 46, further comprising a linear polarizer positioned between the laser and the quarter wave retarder plate so as to:
permit linearly polarized light emitted by the laser to pass therethrough; and
block light reflected back toward the laser by the optical fiber that has a linear polarization that is orthogonal to the linearly polarized light emitted by the laser.
48. (New) A light emission and transmission system as recited in claim 47, wherein the linear polarizer is disposed adjacent to a surface of the quarter wave retarder plate facing the laser.
49. (New) A light emission and transmission system as recited in claim 46, further comprising a lens positioned between the quarter wave retarder plate and the optical fiber.
50. (New) A light emission and transmission system as recited in claim 46, further comprising a lens that is positioned between the quarter wave retarder plate and the laser.

51. (New) A light emission and transmission system as recited in claim 46, further comprising a hermetically sealed housing within which the laser is disposed, the housing having a window through which the light emitted by the laser is transmitted.

52. (New) A light emission and transmission system as recited in claim 51, further comprising a thin film antireflective coating on at least one surface of the window.

53. (New) A light emission and transmission system as recited in claim 51, the quarter wave retarder plate comprising a portion of the hermetically sealed housing.

54. (New) A light emission and transmission system as recited in claim 53, the quarter wave retarder plate comprising the window of the hermetically sealed housing.

55. (New) A light emission and transmission system as recited in claim 53, further comprising a thin film antireflective coating on a surface of the quarter wave retarder plate.